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PATENT APPLICATION

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400ATTORNEY DOCKET NO. 10004872-1IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Michelle R. Lehmeier et al.

Confirmation No.: 6930

Application No.: 09/803,441

Examiner: James A. Thompson

Filing Date: 03-09-2001

Group Art Unit: 2625

Title: Method and Apparatus for Matching Color Image Data with a Corresponding Color in a Defined Color Space

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Alexandria, VA 22313-1450TRANSMITTAL OF APPEAL BRIEFTransmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on May 1, 2007.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month
\$120☐ 2nd Month
\$450☐ 3rd Month
\$1020☐ 4th Month
\$1590☐ The extension fee has already been filed in this application.☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.
* (No fee is due. Fee was previously paid on 12-09-2005.)Please charge to Deposit Account 08-2025 the sum of * ~~\$500.00~~ . At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.☒ A duplicate copy of this transmittal letter is enclosed.☐ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
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Date of facsimile: July 2, 2007

Typed Name: Dan Hu

Signature: 

Respectfully submitted,

Michelle R. Lehmeier et al.

By 

Dan C. Hu

Attorney/Agent for Applicant(s)

Reg No.: 40,025

Date: July 2, 2007

Telephone: (713) 468-8880, ext. 304

REV 10/05a (ApBrief)

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TRANSMITTAL OF APPEAL BRIEF

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Typed Name: Dan Hu

Signature: [Signature]

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By [Signature]

Dan C. Hu

Attorney/Agent for Applicant(s)

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Rev 10/06a (Ap/Brief)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Michelle R. Lehmeier et al.	§	Art Unit:	2625
		§		
Serial No.:	09/803,441	§		
		§	Examiner:	James A. Thompson
Filed:	March 9, 2001	§		
		§		
For:	Method and Apparatus for	§	Atty. Dkt. No.:	10004872-1
	Matching Color Image Data	§		(HPC.0172US)
	with a Corresponding Color in	§		
	a Defined Color Space	§		

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P.O. Box 1450

Alexandria, VA 22313-1450

APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

Sir:

The final rejection of claims 1, 3-14, 18-20, 22-24, 26-29, and 32 is hereby appealed.

I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Co., L.P.

II. RELATED APPEALS AND INTERFERENCES

An Appeal Brief in the present case was filed by Appellant on December 9, 2005. In response to the Appeal Brief of December 9, 2005, prosecution was re-opened by the Examiner and an Office Action dated February 22, 2006 was issued.

Date of Deposit: Jul 2, 2007

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Dan Hu

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Appeal Brief Under 37 C.F.R. § 41.37

III. STATUS OF THE CLAIMS

Claims 1, 3-14, 18-20, 22-24, 26-29, and 32 have been finally rejected and are the subject of this appeal. Claims 2, 15-17, 21, 25, 30, and 31 have been cancelled

IV. STATUS OF AMENDMENTS

No amendment after final rejection has been submitted.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

Independent claim 1 recites a method for matching a color with a corresponding color in a defined color space, comprising:

scanning an object having the color to be matched to produce a color image data signal representative of said object (Fig. 2:30; Specification, p. 9, lines 9-12; p. 16, lines 20-24);

mapping said color image data signal to the defined color space to ascertain the corresponding color (Fig. 2:38; Specification, p. 9, lines 17-21; p. 17, line 27-p. 18, line 3);

determining an identity of the corresponding color (Specification, p. 19, line 18-p. 20, line 2); and

sending the identity of the corresponding color over a network to a website (Fig. 2:40; Specification, p. 9, lines 21-25; p. 20, lines 2-5; p. 22, lines 20-23; p. 23, lines 26-30).

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Independent claim 14 recites a system for matching a color with a corresponding color in a defined color space, comprising:

scanning apparatus (Fig. 1:14), said scanning apparatus to scan an object having the color to be matched, said scanner apparatus to produce a color image data signal representative of said object (Fig. 2:30; Specification, p. 9, lines 9-12; p. 16, lines 20-24); and

a computer (Fig. 1:20) operatively associated with said scanner apparatus, said computer to:

in response to user selection, select a color region of the color image data signal representative of said object (Fig. 2:36; Specification, p. 9, lines 16-17; p. 16, line 28-p. 17, line 26);

determine a dominant color from a plurality of colors in the selected color region (Specification, p. 20, lines 15-28);

map a portion of said color image data signal corresponding to the dominant color to the defined color space to ascertain an identity of the corresponding color (Fig. 2:38; Specification, p. 9, lines 17-21; p. 17, line 27-p. 18, line 3); and

present the identity of the corresponding color to a user (Fig. 2:40; Specification, p. 9, lines 21-25; p. 20, lines 2-5; p. 22, lines 20-23; p. 23, lines 26-30).

Independent claim 26 recites an article comprising a storage device containing program code that when executed cause a system to:

receive color image data representing an object scanned by a scanner, wherein the object has a texture (Specification, p. 9, lines 9-16; p. 16, lines 24-27);

process the color image data to remove influence of the texture, the processing producing a de-texturized color image data (Specification, p. 21, line 19-p. 22, line 3); and

map the de-texturized color image data to determine a corresponding color in a defined color space (Fig. 2:38; Specification, p. 9, lines 17-21; p. 17, line 27-p. 18, line 3),

wherein the program code when executed cause the system to send an identity of the corresponding color over a network to a website (Fig. 2:40; Specification, p. 9, lines 21-25; p. 20, lines 2-5; p. 22, lines 20-23; p. 23, lines 26-30).

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Independent claim 28 recites a system comprising:

a storage device (Fig. 3:42) to store information representing a defined color space (Specification, p. 18, line 1-p. 19, line 5); and

a processor (Fig. 1:20) to:

receive color image data representing an object scanned by a scanner (Specification, p. 9, lines 9-16; p. 16, lines 24-27);

map the color image data to a corresponding color in the defined color space (Fig. 2:38; Specification, p. 9, lines 17-21; p. 17, line 27-p. 18, line 3);

determine an identity of the corresponding color (Specification, p. 19, line 18-p. 20, line 2); and

communicate the identity of the corresponding color to a website (Fig. 2:40; Specification, p. 9, lines 21-25; p. 20, lines 2-5; p. 22, lines 20-23; p. 23, lines 26-30).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claims 26 And 27 Rejected Under 35 U.S.C. § 101.**
- B. Claims 1, 3, 4, And 11 Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 6,618,499 (Kohler) In View Of U.S. Patent No. 6,344,853 (Knight).**
- C. Claims 5-8 And 10 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight And U.S. Patent No. 5,751,829 (Ringland).**
- D. Claim 9 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight And U.S. Patent No. 5,528,703 (Lee).**
- E. Claims 12 And 13 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight And U.S. Patent No. 5,506,946 (Bar).**
- F. Claims 14, 19, 20, And 28 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland.**
- G. Claim 18 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Lee.**
- H. Claims 22 And 23 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight, Ringland, And U.S. Patent No. 5,594,807 (Liu).**

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- I. **Claim 24 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Liu.**
- J. **Claim 26 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Lee.**
- K. **Claim 27 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Lee And Knight.**
- L. **Claim 29 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Knight.**
- M. **Claim 32 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Liu.**

VII. ARGUMENT

The claims do not stand or fall together. Instead, Appellant presents separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-headings as required by 37 C.F.R. § 41.37(c)(1)(vii).

A. **Claims 26 And 27 Rejected Under 35 U.S.C. § 101.**

1. **Claims 26 and 27.**

Independent claim 26 was rejected as being directed to non-statutory subject matter. The Examiner argued that “program code” as recited in claim 26 “is not necessarily computer program code,” and that the “program code is not necessarily encoded, embodied, or stored on the recited computer-readable medium, but merely ‘contained’ on said computer-readable medium.” 2/2/2007 Office Action at 5.

In making the § 101 rejection, the Examiner appears to be focused on the appearance of specific words in the claim, while ignoring how the claim terms would be understood by a person of ordinary skill in the art. The Examiner stated that “program code” is not necessarily computer program code. However, it is unclear what other possibility there can be, particularly since claim 26 recites that the program code is contained in a *computer-readable* storage

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medium. Moreover, claim 26 specifically recites that the program code contained in the computer-readable storage medium when executed causes a system to perform recited tasks. A person of ordinary skill in the art would clearly have understood that the article of claim 26 is directed to executable program code contained in a computer-readable storage medium.

Moreover, with respect to the Examiner's requirement that the program code must be "encoded, embodied, or stored" in the computer-readable storage medium, it is unclear what the basis is for the requirement that this specific language be in the claim. The program code of claim 26 that is contained in the computer-readable storage medium provides a specific functional interrelationship between the program code and the underlying hardware, in this case the computer-readable storage medium and the system. Moreover, since the program code when executed causes the system to perform the tasks of claim 26, the program code cannot be considered a non-functional data structure. Since the program code is a functional data structure that is contained in a computer-readable storage medium and that when executed causes a system to perform recited tasks, the program code's functionality can be realized; as a result, claim 26 is directed to statutory subject matter. *See* M.P.E.P. § 2106.01 (8th ed., Rev. 5), at 2100-18.

In view of the foregoing, it is respectfully submitted that claim 26, and its dependent claim 27, recite statutory subject matter.

Therefore, reversal of the final rejection of the above claims is respectfully requested.

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B. Claims 1, 3, 4, And 11 Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 6,618,499 (Kohler) In View Of U.S. Patent No. 6,344,853 (Knight).

1. Claims 1, 3, 4, and 11.

Independent claim 1 was rejected as being obvious over Kohler and Knight. It is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 1 over Kohler and Knight since no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Knight to achieve the claimed invention, and the hypothetical combination of Kohler and Knight does not teach or hint at all elements of the claim. *See In re Fine*, 837 F.2d 1071, 1073, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) (holding that the PTO has the burden under section 103 to establish a *prima facie* case of obviousness, and that this burden can be satisfied only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references). The Examiner has not satisfied the burden of establishing a *prima facie* case of obviousness.

Claim 1 recites a method for matching a color with a corresponding color in a defined color space, comprising:

- scanning an object having the color to be matched to produce a color image data signal representative of said object;
- mapping said color image data signal to the defined color space to ascertain the corresponding color;
- determining an identity of the corresponding color; and
- sending the identity of the corresponding color over a network to a website for purchasing a product having the corresponding color.

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The Examiner conceded that Kohler does not disclose sending the identity of the corresponding color to a shopping website for purchasing a product having the corresponding color. 2/2/2007 Office Action at 6. However, the Examiner stated that Knight discloses this claimed feature. *Id.*

In the Office Action dated February 2, 2007, the Examiner asserted that Appellant "is attempting a piecemeal analysis of" Kohler and Knight and that Appellant has not properly addressed "how the two references have been brought together by combination." 2/2/2007 Office Action at 2. Appellant disagrees with the Examiner's characterization of Appellant's analysis regarding why Kohler and Knight do not render claim 1 obvious. To make a determination under 35 U.S.C. § 103, several basic factual inquiries must be performed, where two of these basic factual inquiries include: (1) determining the scope and content of the prior art; and (2) ascertaining the differences between the prior art and the claims at issue. *Id.* See *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459 (1965). Thus, as specifically held by the U.S. Supreme Court, the obviousness analysis begins with the determination of the scope and content of the prior art.

The teachings of Kohler and Knight are set forth below.

Kohler describes a technique that purportedly addresses the issue of different color output devices operating in respective different ranges of colors. Kohler, 1:21-23. A color that lies within a multi-dimensional color space for a first device may be outside the multi-dimensional color space for a second device. Kohler, 1:40-43. Consequently, such a color can be output by the first device, but cannot be output by the second device. Kohler, 1:43-45. Kohler describes a technique in which a color that lies outside the multi-dimensional color space of the second device can be mapped to a color point within the multi-dimensional color space of the second

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device. Kohler, 5:30-36; 9:63-10:7. Once mapped, the color can then be provided to the second device, such as a printer, for output (printing). Kohler, 13:5-10.

An output device, such as a printer, can be located over a local area network or the worldwide web. Kohler, 4:61-64. In other words, according to Kohler, once a color is mapped to be within the color space of a particular output device, that color can be provided to such output device (which could be over a network) for output. What Kohler teaches a person of ordinary skill in the art is that mapping of a color between different color spaces is performed so that such color can be output by a particular output device. It is important to note that there is absolutely no hint in Kohler of any desirability to send the mapped color to a shopping website, as recited in claim 1.

In attempting to remedy this shortcoming of Kohler with respect to the claimed subject matter, the Examiner attempted to rely upon Knight as providing the reason to modify Kohler to achieve the claimed subject matter. However, Knight clearly does not provide the reason that would have prompted a person of ordinary skill in the art to combine Kohler and Knight to achieve the claimed invention. *See KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007) (holding that it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine elements in the way the claimed new invention does).

The Examiner relied specifically on the passage in column 10, lines 13-20, of Knight as disclosing the sending of the identity of the corresponding color over a network to a shopping website for purchasing a product having the corresponding color. 2/2/2007 Office Action at 6.

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The cited passage of Knight describes a purchaser selecting from among available colors for a selected product. This selection is in the context of the purchaser picking a product and a logo to combine into a common image. *See Knight*, 9:30-10:67. Note that the selection is made by a *purchaser* by *clicking* on one of several keys (154a-154e) shown in the web page of Figure 3E of Knight. A user *manually* selecting a color by clicking on an item of a web page, as disclosed by Knight, does *not* teach or hint sending the identity of *the corresponding color, ascertained by mapping a color image data signal produced from a scan to a defined color space*.

The teaching in Knight of a purchaser manually selecting a color and communicating the manual selection of that color to a website would not have prompted a person of ordinary skill in the art to send the identity of the mapped color described in Kohler to a website for purchasing a product having the color. Kohler teaches a system that attempts to achieve consistent output among different types of output devices. On the other hand, Knight's teachings are completely different, and relate to user selection of color in making an online purchase. Objectively, a person of ordinary skill in the art would not have been prompted to combine the disparate teachings of Kohler and Knight to achieve the claimed subject matter, as there clearly did not exist any reason to incorporate the subject matter of Knight (manual selection by a user in an online purchase) into Kohler (mapping among different color spaces of different output devices).

The Examiner argued that Appellant "ignores the combination of references that has been clearly laid out in the rejection." 2/2/2007 Office Action 2. Appellant is not ignoring the combination of references; Appellant is arguing that the Examiner has failed to cite to objective evidence that Kohler and Knight would have provided the reason that would have prompted a person of ordinary skill in the art to combine Kohler and Knight to achieve the claimed

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invention. Kohler refers to a system for mapping between different color spaces to enable output of images to a variety of destinations. On the other hand, Knight refers to a purchaser clicking on one of several keys to manually select a color on a web page. The proposed combination of completely un-related elements of Kohler and Knight as performed by the Examiner is based on impermissible hindsight, since the objective evidence establishes that no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Knight. Without the benefit of the disclosure of the present invention, a person of ordinary skill in the art would clearly not have been led to combine the completely un-related reference teachings in the manner proposed by the Examiner.

Another point made by the Examiner is that "the language of claim 1 in no way requires that any of the steps be performed automatically." 2/2/2007 Office Action at 3. The Examiner argued that "the recited steps can be performed by a user at a personal computer with an internet connection and standard software." *Id.* The Examiner then went on to state that "Applicant is respectfully reminded that it is improper to import claim limitations from the specification" *Id.*

Contrary to the assertion made by the Examiner, Appellant has not incorporated limitations from the Specification into claim 1. In fact, the specific argument made by Appellant is as follows: a user *manually* selecting a color by clicking on an item of a web page, as disclosed by Knight, does *not* teach or hint sending the identity of the corresponding color, *ascertained by mapping a color image data signal produced from a scan to a defined color space*. This argument refers to the specific language of claim 1, and not to limitations from the Specification. A purchaser in Knight that manually selects a color does so by clicking on one of several keys to manually select a color on a web page. Knight specifically fails to disclose or

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even hint at sending the identity of a corresponding color that is ascertained by mapping a color image data signal produced from a scan to a defined color space.

In addition, the motivation stated by the Examiner as the basis for combining Knight and Kohler is not persuasive. The motivation cited by the Examiner is "to aid the purchase of particular products by allowing a buyer to select and choose between various possible colors in a set of products (column 3, lines 7-12 of Knight)." 2/2/2007 Office Action at 3. This stated motivation is completely un-related to the teachings of Kohler, which is directed to the problem of handling variations in color gamuts for different color devices, such as printers and monitors. Kohler, 1:21-25. Due to the different color gamuts, a color can be output by a first device, but cannot be output by a second device. Kohler, 1:43-45. Kohler describes a technique in which a color that lies outside the multi-dimensional color space of the second device can be mapped to a color point within the multi-dimensional color space of the second device. Kohler, 5:30-36; 9:63-10:7. Once mapped, the color can then be provided to the second device, such as a printer, for output (printing). Kohler, 13:5-10. Providing the ability for a user to choose among available colors for a selected product, as taught by Knight, is completely irrelevant to the problem that is sought to be solved by Kohler.

In view of the foregoing, it is clear that the *prima facie* case of obviousness is defective since no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Knight.

Another defect of the obviousness rejection is that the hypothetical combination of Kohler and Knight does not teach or hint at all elements of claim 1.

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Note that claim 1 recites sending *the* identity of the corresponding color over a network to a website. Claim 1 does not recite sending an identity of the corresponding color over a network to a website. The element “the identity” refers to the identity of the corresponding color that is determined in the determining act of claim 1, where “the corresponding color” refers to the ascertained corresponding color based on mapping the color image data signal to a defined color space, and where the color image data signal is produced based on scanning an object. In other words, “the identity of the corresponding color” recited in claim 1 is *not* any identity of a color – claim 1 is very specific that the identity of the corresponding color is related to a color image data signal produced by scanning an object. Therefore, the citation of Knight as disclosing or suggesting the sending element of claim 1 is clearly erroneous, as Knight merely teaches that a user can click on a color to select a color for a product.

The Examiner conceded that Kohler fails to disclose the last clause of claim 1. As noted above, Knight also fails to disclose or hint at the sending act of claim 1. Therefore, the hypothetical combination of Kohler and Knight fails to disclose or hint at the sending of the identity of *the* corresponding color (ascertained from mapping the color image data signal produced by scanning an object to a defined color space) over a network to a shopping website for purchasing a product having the corresponding color.

In view of the foregoing, claim 1 and its dependent claims are clearly non-obvious over Kohler and Knight.

Reversal of the final rejection of the above claims is respectfully requested.

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C. Claims 5-8 And 10 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight And U.S. Patent No. 5,751,829 (Ringland).

1. Claims 5-8 and 10.

In view of the defective obviousness rejection of base claim 1 over Kohler and Knight, it is respectfully submitted that the obviousness rejection of dependent claims 5-8 and 10 over Kohler, Knight, and Ringland is also defective.

Therefore, reversal of the final rejection of the above claims is respectfully requested.

D. Claim 9 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight And U.S. Patent No. 5,528,703 (Lee).

1. Claim 9.

Claim 9 was rejected as being obvious over Kohler, Knight, and Lee. In view of the defective obviousness rejection of base claim 1 over Kohler and Knight, it is respectfully submitted that the obviousness rejection of claim 9 over Kohler, Knight, and Lee is defective.

Moreover, as explained below in Section J.1, no reason existed to combine the teachings of Kohler and Lee to achieve subject matter similar to the subject matter of claim 9. Therefore, for this additional reason, the obviousness rejection of claim 9 over Kohler, Knight, and Lee is defective.

Reversal of the final rejections of the above claim is respectfully requested.

E. Claims 12 And 13 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight And U.S. Patent No. 5,506,946 (Bar).

1. Claims 12 and 13.

In view of the defective obviousness rejection of base claim 1 over Kohler and Knight, it is respectfully submitted that the obviousness rejection of dependent claims 12 and 13 over Kohler, Knight, and Bar is also defective.

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Reversal of the final rejection of the above claims is respectfully requested.

F. Claims 14, 19, 20, And 28 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland.

1. Claims 14, 19, 20, and 28.

Independent claim 14 was rejected as being obvious over Kohler and Ringland. A *prima facie* case of obviousness has not been established with respect to claim 14 for at least the following reasons: (1) the hypothetical combination of Kohler and Ringland fails to teach or hint at all elements of claim 14; and (2) no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Ringland.

Claim 14 recites a system that has a scanning apparatus to scan an object having a color to be matched, and a computer operatively associated with the scanner apparatus to:

- in response to user selection, select a color region of the color image data signal representative of said object;
- determine a dominant color from a plurality of colors in the selected color region;
- map a portion of said color image data signal corresponding to the dominant color to the defined color space to ascertain an identity of the corresponding color; and
- present the identity of the corresponding color to a user.

The Examiner conceded that Kohler fails to disclose: in response to user selection, select a color region of the color image data signal representative of the object; determine a dominant color from a plurality of colors in the selected color region; present the identity of the corresponding color to a user; and that the mapped portion of the color image signal corresponds to the dominant color. 2/2/2007 Office Action at 11. The Examiner relied upon Ringland as disclosing the claimed features missing from Kohler. *Id.*

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The Examiner cited to various passages in columns 19 and 20 of Ringland as disclosing these claimed features. *Id.* The cited passages of Ringland describe a paint matching window that contains a "Match Paint" button 702 for finding paints 706 that match the colors of any sample that has been marked for later use. The user is shown a color swath for each matching paint, along with the paint name, the manufacturer's number, and the page number in the manufacturer's book. These cited passages of Ringland refer to matching paints (note plural sense) to plural colors (note plural sense) of a sample. There is no indication or hint here, or anywhere else in Ringland, of a computer determining a *dominant* color within a selected color region of a color image data signal that represents an object that has been scanned by a scanning apparatus, and mapping a portion of the color image data signal corresponding to the *dominant* color to the defined color space.

The Examiner argued that the term "dominant color" is "very broad terminology" and that the Examiner has given this term its "broadest reasonable interpretation consistent with the specification." 2/2/2007 Office Action at 4. It appears that in giving a "broad" interpretation to "dominant color," that the Examiner has basically rendered "dominant" meaningless. The Examiner's statement that the "color from the plurality of colors which matches the desired marked sample color is the dominant color" (2/2/2007 Office Action at 4) does not satisfy the elements recited in claim 14. The specific teaching in Ringland is that a "Match Paint" button 702 is used for finding paints that match the colors of any sample that has been marked for later use. It is unclear how finding paints that match the colors of a sample, as taught by Ringland, provides any teaching or hint of determining a dominant color from a plurality of colors in the selected color region. Effectively, the Examiner has read the term "dominant" out of claim 14. According to the Examiner, any matching paint is considered a dominant paint. Thus, according

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to the reading of the Examiner, the scope of claim 14 with the term "dominant color" would be same as claim 14 with the term "dominant" removed, since, according to the Examiner, any color that matches another color is considered dominant.

Such an interpretation is clearly an *unreasonable* interpretation. Therefore, since the hypothetical combination of Kohler and Ringland does not disclose or hint at all elements of claim 14, a *prima facie* case of obviousness has not been established for at least this reason.

Moreover, it is respectfully submitted that there clearly did not exist any motivation or suggestion to combine the teachings of Kohler and Ringland. The cited portions of Ringland refer to matching paints to plural colors of a sample. On the other hand, Kohler relates to mapping a color point in a first color space of a first output device to a different color space for another output device. A person of ordinary skill in the art looking to the teachings of Kohler and Ringland clearly would not have been prompted to combine the disparate teachings of references to achieve the claimed invention.

The motivation stated by the Examiner to combine Kohler and Ringland is "to allow the user to properly match a desired color with an available color palette" 2/2/2007 Office Action at 12. However, this stated motivation has nothing to do with the language of claim 14, which recites determining a dominant color from a plurality of colors in the selected color region and mapping a portion of the color image data signal corresponding to the dominant color to the defined color space. The subject matter of claim 14 is completely un-related to Kohler, which address the issue of inconsistent color spaces for different output devices. The issue of determining a dominant color is clearly inapplicable to the Kohler technique of harmonizing different color spaces among different output devices.

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Therefore, since no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Ringland to achieve the claimed invention, it is respectfully submitted that the *prima facie* case of obviousness of claim 14 is defective for this additional reason.

Independent claim 28 is allowable for similar reasons as claim 14.

In view of the foregoing, reversal of the final rejection of claims is respectfully requested.

G. Claim 18 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Lee.

1. Claim 18.

In view of the defective obviousness rejection of base claim 14 over Kohler and Ringland, it is respectfully submitted that the obviousness rejection of dependent claim 18 over Kohler, Ringland, and Lee is also defective.

Moreover, as discussed in Section J.1 below, no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Lee to achieve subject matter similar to the subject matter of claim 18. For this additional reason, the obviousness rejection of claim 18 over Kohler, Ringland, and Lee is defective.

Reversal of the final rejection of the above claim is respectfully requested.

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H. Claims 22 And 23 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Knight, Ringland, And U.S. Patent No. 5,594,807 (Liu).

1. Claim 22.

In view of the defective obviousness rejection of base claim 1 over Kohler and Knight, and in view of the defective obviousness rejection of base claim 7 over Kohler, Knight, and Ringland, it is respectfully submitted that the obviousness rejection of dependent claim 22 over Kohler, Knight, Ringland, and Liu is also defective.

Therefore, reversal of the final rejection of the above claim is respectfully requested.

2. Claim 23.

Similarly, in view of the defective obviousness rejection of base claim 1 over Kohler and Knight, and the defective obviousness rejection of base claim 7 over Kohler, Knight, and Ringland, it is respectfully submitted that the obviousness rejection of dependent claim 23 over Kohler, Knight, Ringland, and Liu is also defective.

Moreover, with respect to the subject matter of claim 23, contrary to the assertion by the Examiner, there is no teaching or hint of determining a dominant color in a selected color region and mapping a portion of the color image data signal corresponding to the determined dominant color in Ringland, as explained in detail in Section F.1, above. This is a further basis that the obviousness rejection of claim 23 is defective.

Reversal of the final rejection of the above claim is respectfully requested.

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L. Claim 24 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Liu.

1. Claim 24.

In view of the defective obviousness rejection of base claim 14 over Kohler and Ringland, it is respectfully submitted that the obviousness rejection of claim 24 over Kohler, Ringland, and Liu is defective.

Moreover, the Examiner is incorrect in stating that Liu discloses determining a dominant color in the selected color region using histograms representing respective colors. The Examiner cited Figs. 4 and 5, and column 9, lines 56-67, of Liu as disclosing this feature. 2/2/2007 Office Action 15. The cited passages of Liu refer to establishing a uniform scale for comparison of different histograms, which involves normalizing each value of a reference histogram so that the value of a peak is equal to the number of pixels in a window. Liu, 9:57-61. Normalizing the reference histogram and normalizing the brightness scale, as disclosed by Liu, has nothing to do with determining a dominant color in the selected color space region using histograms representing respective colors, where this determined dominant color can be mapped to a portion of a color image data signal.

Therefore, it is respectfully submitted that the hypothetical combination of Kohler, Knight, Ringland, and Liu does not disclose or hint at all elements of claim 24. The obviousness rejection of claim 24 is defective for this additional reason.

Reversal of the final rejection of the above claim is respectfully requested.

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J. Claim 26 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Lee.

1. Claim 26.

Independent claim 26 was rejected as being obvious over Kohler in view of Lee. Claim 26 recites an article comprising a computer-readable storage medium containing program code that when executed cause a system to:

- receive color image data representing an object scanned by a scanner, wherein the object has a texture;
- process the color image data to remove influence of the texture, the processing producing a de-texturized color image data; and
- map the de-texturized color image data to determine a corresponding color in a defined color space,
- wherein the program code when executed cause the system to send an identity of the corresponding color over a network to a website.

A *prima facie* case of obviousness has not been established with respect to claim 26 for at least the following reasons: (1) the hypothetical combination of Kohler and Lee does not disclose or hint at all elements of claim 26; and (2) no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Lee to achieve the claimed invention.

The Examiner conceded that Kohler does not disclose the following elements: an object having a texture; processing the color image data to remove influence of the texture, the processing producing a de-texturized color image data; and mapping the de-texturized color image data to determine a corresponding color in a defined color space. 2/2/2007 Office Action at 16. In attempting to remedy this defect of Kohler, the Examiner relied upon Lee as disclosing the missing claimed subject matter. *Id.*

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Lee mentions that an object of interest can have texture, and that the texture of the object of interest can be removed. Lee, 6:58-61. However, in Lee, the goal of removing the texture of an object is for the purpose of creating a mask that identifies the size, shape, and location of the object of interest. Lee, 6:54-56. There is absolutely no hint of processing a *color* image data to remove influence of texture, and producing a de-texturized *color* image data, and mapping the de-texturized *color* image data to determine a corresponding color in a defined color space, as recited in claim 26. In fact, Lee does not even use the word "color" in its disclosure.

Therefore, it is clear that a hypothetical combination of Kohler and Lee does not teach or hint at all elements of claim 26.

Moreover, there existed no reason that would have prompted a person of ordinary skill in the art to combine the teachings of Kohler and Lee. As noted above, Kohler relates to mapping a color in one color space to a color in a different color space associated with corresponding different output devices. The mapping is performed by mapping a color point in one space to a different color point in another space. The issue of texturing clearly is not present in Kohler, and clearly there did not exist any hint of any desirability to perform de-texturing. The stated motivation (by the Examiner) for combining Kohler and Lee is that "object texture detracts from the ability to determine the size, shape and location of objects of interest (column 6, lines 54-60 of Lee)." 2/2/2007 Office Action at 16-17. Removing the texture for determining the size, shape, and location of an object of interest, as stated by Lee, is completely different from the subject matter of claim 26, which recites processing the *color* image data to remove influence of the texture, the processing producing a de-texturized *color* image data, and mapping the de-texturized *color* image data to determine a corresponding *color* in a defined color space.

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Determining the size, shape, and location of an object of interest, which is the stated motivation for combining Lee with Kohler, has nothing to do with the subject matter of claim 26.

In view of this, it is respectfully submitted that no reason existed that would have prompted a person of ordinary skill to combine the teachings of Kohler and Lee to achieve the claimed subject matter.

Therefore, a *prima facie* case of obviousness has clearly not been established with respect to claim 26 and its dependent claims.

Reversal of the final rejection of the above claim is respectfully requested.

K. Claim 27 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Lee And Knight.

1. Claim 27.

In view of the defective obviousness rejection of base claim 26 over Kohler and Lee, it is respectfully submitted that the obviousness rejection of claim 27 over Kohler in view of Lee and Knight is defective. Moreover, as discussed above in connection with claim 1, since the combination of Kohler and Knight performed by the Examiner is improper with respect to subject matter similar to that of claim 27, the obviousness rejection of claim 27 is defective for this additional reason.

Therefore, reversal of the final rejection of the above claim is respectfully requested.

L. Claim 29 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Knight.

1. Claim 29.

In view of the defective obviousness rejection of base claim 28 over Kohler and Ringland, it is respectfully submitted that the obviousness rejection of dependent claim 29 over Kohler, Ringland, and Knight is also defective.

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Moreover, in view of the defective combination of Kohler and Knight with respect to the subject matter of claim 29 (sending the identity of the corresponding color to a shopping website in response to user selection to enable a purchase of a product containing the corresponding color), the obviousness rejection of claim 29 is further defective for this additional reason.

Reversal of the final rejection of the above claim is respectfully requested.

M. Claim 32 Rejected Under 35 U.S.C. § 103 Over Kohler In View Of Ringland And Liu.

1. Claim 32.

In view of the defective obviousness rejection of base claim 28 over Kohler and Ringland, it is respectfully submitted that the obviousness rejection of dependent claim 32 over Kohler, Ringland, and Liu is also defective. Moreover, as discussed above in Section I.1, Liu does not disclose or hint at determining the dominant color in the selected color region by using histograms representing respective colors. This is an additional reason that the obviousness rejection of claim 32 is defective.

Reversal of the final rejection of the above claim is respectfully requested.


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CONCLUSION

In view of the foregoing, reversal of all final rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

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VIII. APPENDIX OF APPEALED CLAIMS

The claims on appeal are:

1 1. A method for matching a color with a corresponding color in a defined color
2 space, comprising:
3 scanning an object having the color to be matched to produce a color image data
4 signal representative of said object;
5 mapping said color image data signal to the defined color space to ascertain the
6 corresponding color;
7 determining an identity of the corresponding color; and
8 sending the identity of the corresponding color over a network to a website for
9 purchasing a product having the corresponding color.

1 3. The method of claim 1, wherein the identity of the corresponding color comprises
2 a reference number, and wherein sending the identity of the corresponding color comprises
3 sending the reference number associated with said corresponding color.

1 4. The method of claim 3, further comprising, using said reference number to match
2 a color with the color to be matched.

1 5. The method of claim 3, further comprising, displaying said reference number.

1 6. The method of claim 1, further comprising, selecting a color region on said object,
2 the color region containing said color to be matched.

1 7. The method of claim 1, further comprising, selecting a color region of said color
2 image data signal, the color region containing said color to be matched.

1 8. The method of claim 1, wherein said object comprises a plurality of colors, and
2 further comprising selecting one of said plurality of colors as said color to be matched.

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1 9. The method of claim 1, wherein said object has a texture, and further comprising
2 processing said color image data signal to remove the influence of said texture from the color
3 image data signal.

1 10. The method of claim 1, wherein said defined color space comprises the Pantone
2 Matching System.

1 11. The method of claim 1, wherein mapping said color image data signal to the
2 defined color space to ascertain the corresponding color comprises using a color look-up table.

1 12. The method of claim 11, wherein said color image data signal comprises a
2 plurality of pixels, each having a red tristimulus value, a green tristimulus value, and a blue
3 tristimulus value associated therewith, and wherein mapping said color image data signal to the
4 defined color space to ascertain the corresponding color further comprises:

5 computing an average red tristimulus value, an average green tristimulus value,
6 and an average blue tristimulus value from the red, green and blue tristimulus values of
7 one or more of said plurality of pixels; and

8 inputting the average red, green, and blue tristimulus values into said color
9 look-up table to obtain the corresponding color.

1 13. The method of claim 11, wherein said color image data signal comprises a
2 plurality of pixels, each having a red tristimulus value, a green tristimulus value, and a blue
3 tristimulus value associated therewith, and wherein mapping said color image data signal to the
4 defined color space to ascertain the corresponding color further comprises:

5 inputting the red, green and blue tristimulus values of one or more of said
6 plurality of pixels into said color look-up table to obtain one or more reference numbers;
7 and

8 computing an average reference number from said one or more reference
9 numbers, the average reference number identifying said corresponding color.

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1 14. A system for matching a color with a corresponding color in a defined color
2 space, comprising:
3 scanning apparatus, said scanning apparatus to scan an object having the color to
4 be matched, said scanner apparatus to produce a color image data signal representative of
5 said object; and
6 a computer operatively associated with said scanner apparatus, said computer to:
7 in response to user selection, select a color region of the color image data
8 signal representative of said object;
9 determine a dominant color from a plurality of colors in the selected color
10 region;
11 map a portion of said color image data signal corresponding to the
12 dominant color to the defined color space to ascertain an identity of the corresponding
13 color; and
14 present the identity of the corresponding color to a user.

1 18. The system of claim 14, wherein said object has a texture, and further comprising,
2 at least one computer readable storage device operatively associated with said
3 computer; and
4 computer readable program code for removing the influence of the texture from
5 said color image data signal, the computer readable program code being stored on said at
6 least one computer readable storage device.

1 19. The system of claim 14, further comprising:
2 at least one computer readable storage device operatively associated with said
3 computer; and
4 a color look-up table stored on the at least one computer readable storage device,
5 said computer using the color look-up table when mapping said portion of the color
6 image data signal to the defined color space to ascertain the identity of the corresponding
7 color.

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1 20. The system of claim 14, wherein said defined color space comprises the Pantone
2 Matching System.

1 22. The method of claim 7, further comprising randomly selecting pixels in the
2 selected color region, wherein mapping said color image data signal to the defined color space
3 comprises mapping a portion of the color image data signal corresponding to the randomly
4 selected pixels to the defined color space.

1 23. The method of claim 7, further comprising determining a dominant color in the
2 selected color region using histograms representing respective colors,
3 wherein mapping said color image data signal to the defined color space
4 comprises mapping a portion of the color image data signal corresponding to the
5 determined dominant color to the defined color space.

1 24. The system of claim 14, wherein the computer determines the dominant color in
2 the selected color region using histograms representing the plurality of colors.

1 26. An article comprising a computer-readable storage medium containing program
2 code that when executed cause a system to:
3 receive color image data representing an object scanned by a scanner, wherein the
4 object has a texture;
5 process the color image data to remove influence of the texture, the processing
6 producing a de-texturized color image data; and
7 map the de-texturized color image data to determine a corresponding color in a
8 defined color space,
9 wherein the program code when executed cause the system to send an identity of
10 the corresponding color over a network to a website.

1 27. The article of claim 26, wherein sending the identity of the corresponding color to
2 the website comprises sending the identity of the corresponding color to a shopping website for
3 purchasing a product having the corresponding color.

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1 28. A system comprising:
2 a storage device to store information representing a defined color space; and
3 a processor to:
4 receive color image data representing an object scanned by a scanner;
5 in response to user selection, select a color region of the color image data;
6 determine a dominant color from a plurality of colors in the selected color
7 region;
8 map a portion of the color image data corresponding to the dominant color
9 to the defined color space to ascertain an identity of a corresponding color; and
10 communicate the identity of the corresponding color to a website.

1 29. The system of claim 28, wherein the processor is adapted to send the identity of
2 the corresponding color to a shopping website in response to user selection to enable a purchase
3 of a product containing the corresponding color.

1 32. The system of claim 28, wherein the processor is adapted to determine the
2 dominant color in the selected color region by using histograms representing respective colors.

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IX. EVIDENCE APPENDIX

None.

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X. RELATED PROCEEDINGS APPENDIX

None.